

# Docker Containers

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## GitHub Repository URL:

<https://github.com/Eshwar7208/assignment1-docker-containers>

## Commands Used

builds the latest images and starts all required services

**docker compose up --build**

stops the containers and  
completely removes them  
along with their associated  
volumes to ensure a clean  
reset of the environment.

**docker compose down -v**

## Console Output:

```
app-1 | {  
app-1 | "total_trips": 6,  
app-1 | "avg_fare_by_city": [  
app-1 | {  
app-1 | "city": "Charlotte",  
app-1 | "avg_fare": 16.25  
app-1 | },  
app-1 | {  
app-1 | "city": "New York",  
app-1 | "avg_fare": 19.0  
app-1 | },  
app-1 | {  
app-1 | "city": "San Francisco",  
app-1 | "avg_fare": 20.25  
app-1 | }  
app-1 | ],  
app-1 | "top_by_minutes": [  
app-1 | {  
app-1 | "city": "San Francisco",  
app-1 | "minutes": 28,  
app-1 | "fare": 29.3  
app-1 | },  
app-1 | {  
app-1 | "city": "New York",  
app-1 | "minutes": 26,  
app-1 | "fare": 27.1  
app-1 | },
```

```
app-1 | {
app-1 | "city": "Charlotte",
app-1 | "minutes": 21,
app-1 | "fare": 20.0
app-1 | },
app-1 | {
app-1 | "city": "Charlotte",
app-1 | "minutes": 12,
app-1 | "fare": 12.5
app-1 | },
app-1 | {
app-1 | "city": "San Francisco",
app-1 | "minutes": 11,
app-1 | "fare": 11.2
app-1 | },
app-1 | {
app-1 | "city": "New York",
app-1 | "minutes": 9,
app-1 | "fare": 10.9
app-1 | }
app-1 | ]
app-1 | }
app-1 exited with code 0
```

## out/summary.json

```
"total_trips": 6,
"avg_fare_by_city": [
  {
    "city": "Charlotte",
    "avg_fare": 16.25
  },
  {
    "city": "New York",
    "avg_fare": 19.0
  },
  {
    "city": "San Francisco",
    "avg_fare": 20.25
  }
],
"top_by_minutes": [
  {
    "city": "San Francisco",
```

```
        "minutes": 28,
        "fare": 29.3
    },
    {
        "city": "New York",
        "minutes": 26,
        "fare": 27.1
    },
    {
        "city": "Charlotte",
        "minutes": 21,
        "fare": 20.0
    },
    {
        "city": "Charlotte",
        "minutes": 12,
        "fare": 12.5
    },
    {
        "city": "San Francisco",
        "minutes": 11,
        "fare": 11.2
    },
    {
        "city": "New York",
        "minutes": 9,
        "fare": 10.9
    }
]
```

## Reflection

Through this assignment, I learned how to use Docker Compose to set up and manage multiple containers, allowing a Python application to communicate with a PostgreSQL database. This experience helped me better understand how containers work together, how services depend on each other, and how to configure environments in a container-based system.